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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/631,212	08/03/2000	Nicolas Vazquez	5150-44800	1157

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EXAMINER

KHATRI, ANIL

ART UNIT PAPER NUMBER

2191

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/631,212	<b>Applicant(s)</b> VASQUEZ ET AL.	
	<b>Examiner</b> Anil Khatri	<b>Art Unit</b> 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 71-104 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 71-104 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/11/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

As per applicant request claims 1-70 have been canceled and new claims 71-104 have been entered.

Amendment is necessitated by new ground of rejection.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 71-104 are rejected under 35 U.S.C. 102(a) as being anticipated by *Chin et al.*, “*Model Based Recognition in Robot Vision*” ACM Computing Surveys, vol. 18, no. 1, March 1986, pp 67-108.

Regarding claims 71, 94 and 101-104

*Chin et al teaches,*

displaying information indicating a plurality of machine vision problems (page 67, columns 1-2,

“although some commercial... these requirements”);

receiving user input selecting a machine vision problem from the plurality of machine vision

problems (page 75, column 1, section 3.1.1, “the user interactively...”); and

automatically creating a prototype in response to the selected machine vision problem, wherein

the prototype comprises information specifying a sequence of functions, wherein the information

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specify the sequence of function is useable by a prototyping environment to invoke the sequence of functions to perform a machine vision process that solves the selected machine vision problem, wherein said atomically creating is performed with out direct user input selecting the function (page 75, column 2, section matching: “the tree is automatically...image feature”).

Regarding claims 72 and 95

*Chin et al teaches,*

The prototype is not an executable program (page 75, column 2, section matching: “the tree is automatically...image feature”).

Regarding claims 73 and 96

*Chin et al teaches,*

Image processing, image analysis, industrial automation, test and measurement and robotics (page 72, column 1, 2<sup>nd</sup> paragraph, “most existing... is given in Kitchin and Pugh” and 2<sup>nd</sup> column as well).

Regarding claims 74 and 97

*Chin et al teaches,*

Displaying plurality of machine vision problems categorized by one or more of color, shape, and pattern (page 75, column 2, feature section: for each connected... more compact”).

Regarding claims 75 and 98

*Chin et al teaches*

one or more filtering functions for smoothing, edge detection, and/or convolution (page 78, column 1, section 3.2.1 : Perkins.. the largest closed concurve”);

one or more morphology function for modifying the shape of objects in an

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image, including erosion, dilation, opening, and/or closing (page 78, column 2, 1<sup>st</sup> paragraph, for each concurve... these points”);

one or more thresh holding function for selecting and/or converting ranges of pixel values in images (page 78, column 2, last paragraph, the chain... fit included”); and

one or more particle filtering function to filter objects based on shape measurements (page 79, 1<sup>st</sup> column, section matching: the comparison.. to image coordinates”).

Regarding claims 76 and 99

*Chin et al teaches*

a histogram function that counts and graphs a total number of pixels in each grayscale value (page 82, 2<sup>nd</sup> column, section feature: “each feature is extracted... edge direction”, page 83, 2<sup>nd</sup> column line 1- to end of block object”);

a line profile function that returns grayscale values of pixels along a line drawn through an image with a line tool and graphs the values (page 82, 2<sup>nd</sup> column section feature: simple feature are detected... through last line of the paragraph edge direction”);

one or more particle analysis functions that computes measurements on objects in an image (page 79, 1<sup>st</sup> column, section matching: the comparison.. to image coordinates”); and

a 3D view function that displays an image using an isometric view in which each pixel from an image source is represented as a column of pixels in a 3D view, wherein the pixel value corresponds to an altitude of the column of pixels (page 69, 1<sup>st</sup> column section 1. model based object recognition”).

Regarding claims 77 and 100

*Chin et al teaches*

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an edge detection function that finds edges along a line drawn through an image with a line tool (page 80, 1<sup>st</sup> column section 3.2.2: these features... to the sides”);

a blob analysis function (page 81, 2<sup>nd</sup> column last paragraph, “the centroid... the centroid”);

a pattern matching function that locates regions of a grayscale image that match a predetermined template (page 81, 1<sup>st</sup> column 2<sup>nd</sup> paragraph, recognition is based on template... match is found”);

a shape matching function that searches for the presence of a shape in an image and specifies the location of each matching shape (page 81, 1<sup>st</sup> column 2<sup>nd</sup> paragraph, recognition is based on template... match is found”);

a caliper function that computes measurement, including distances, areas, and/or angles, based on results returned from other image processing functions (column 82, 2<sup>nd</sup> column section feature: “by employing the method in Chow.. for final recognition”); and

a color matching function that quantifies which colors and how much of each color exist in a region of an image and uses this information to determine if another image contain the same colors in a substantially equal ratio (page 83, 2<sup>nd</sup> column section matching: the matching is carried... model features”).

Regarding claims 78-86

The rejection of claim 71 is incorporated and further claims 78-86 recites similar limitation as in claim 71, therefore claims 78-86 are rejected under same rational.

Regarding claim 87

*Chin et al teaches*

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Connecting to a computer server and downloading the information from the computer server ("is well known in the art").

Regarding claims 88-90

The rejection of claim 71 is incorporated and further claims 88-90 recites similar limitation as in claim 71, therefore claims 88-90 are rejected under same rational.

Regarding claim 91

*Chin et al teaches*

The program is a graphical program (page 70, figure 1, column 1).

Regarding claim 92

*Chin et al teaches*

Programmatically generating script wherein the script is executable to generate a program implementing the machine vision process specified by the prototype (page 87, 2<sup>nd</sup> column section 3.4: on the basis.. in table 2").

Regarding claim 93

*Chin et al teaches*

Automotive, biomedical, chemical, electronics, manufacturing and pharmaceuticals (see introduction and summary).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anil Khatri whose telephone number is 571-272-3725. The examiner can normally be reached on M-F 8:30-5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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ANIL KHATRI  
PRIMARY EXAMINER